



4.2.6 Greenlee County

Geography

Greenlee County is comprised of 1,838 square miles and is located in the eastern part of the State. The major watercourses include the Gila River, San Francisco River, Blue River, Black River and Eagle Creek. The County is mapped into three ecoregions, Arizona Mountain Forest, Chihuahuan Desert and Sierra Madre Occidental Pine-Oak Forest. The Forest elevations range between 4,000 - 13,000 resulting in cool summers and cold winters. The Desert elevations range between 3,000 -4,500 with hot and dry summers and mild to cool winters. The Pine-Oak Forest elevation is generally above 5,000 with cool summers and cold winters.

Population

In 2005, the County's population was 8,300. The population decreased at a rate of 2.9% between 2000 and 2005, while the State experienced growth at a rate of 17.8 % during the same period. The Town of Clifton, Greenlee County's seat, also has the highest population among the communities in the County. No significant growth is expected to occur in the County in the foreseeable future.

Greenlee County Population, 1990-2040							
Jurisdiction	1990	2000	2005	2010	2020	2030	2040
Greenlee County	8,008	8,547	8,300	8,209	8,189	8,289	8,611
Clifton	2,840	2,596	2,495	3,278	3,507	3,733	3,921
Duncan	662	812	805	888	949	1,028	1,113
Note: Figures for 1990, 2000, 2005 from Arizona Dept. of Commerce. Figures for 2010-2040 from AZ DES (projections date from 1997).							
Source: Arizona Department of Commerce, May 2003; Arizona Department of Economic Security, February 1997.							

Economy & Labor Force

The County's major industries include Retail Trade, Service and Public Administration. The civilian labor force is nearly 3,500. Phelps Dodge Corporation, one of the original copper mining companies in the County, remains one of the most active economic engines behind the County's development. The unemployment rate of 5.7% is somewhat higher than the statewide average of 4.6% for 2005.

Slow growth history has not created a need for large-scale land use development master planning. The County Administrator administers all localized capital improvement projects including airport growth, bridge replacement, school construction, and solid waste removal.

Historic Hazard Events

During the development of the original State of Arizona All-Hazard Mitigation Plan, a list of historic hazard events was compiled. Most counties researched local records and governmental databases to update and add records of recent hazards to the state compiled list for use in their plans. Additional hazard records were researched using the same criteria, with the exception that all damages greater than \$1 were included. Therefore, due to the variety of data sources and criteria, it should be kept in mind that the numbers reported reflect the availability of such data from those sources and the numbers are expected to under-predict the losses actually sustained over the past 30 to 40 years. A more thorough search for historic data in future planning efforts is mentioned in the county plans and encouraged by ADEM.

It is our hope that this data coupled with other risk assessment information will prove to be instrumental in assisting the County and State in future planning and mitigation efforts. We believe this can happen by this data accurately indicating which hazards we are most susceptible to; how damaging these hazards can be to us; and the damage costs or costs avoided through future mitigation projects.



Historic Record of Disaster Events in Greenlee County								
Event Type	Statewide or Multiple County, Incl Greenlee				Substantially Greenlee			
	Total	Fatalities	Injuries	Loss \$	Total	Fatalities	Injuries	Loss \$
Drought	67	0	0	300,000,000	0	0	0	0
Earthquake	0	0	0	0	2	0	0	0
Flooding/Flash Flooding	10	19	112	899,100,000	14	5	0	9,651,000
Hazardous Materials Incidents	0	0	0	0	6	0	4	0
Thunderstorms/High Winds	0	0	0	0	6	0	0	40,000
Tropical Storms / Hurricane	4	37	975	750,800,000	0	0	0	0
Wildfire	16	0	0	0	4	0	0	0
Winter Storms	14	0	0	110,000	11	0	0	0
Note: "Statewide or Multiple County, Incl Greenlee" events met the 1 or more of the following criteria: at least 1 injury and/or fatality or Historical Significance. All had at least \$50,000 in reported Losses. "Substantially Greenlee" events met 1 or more of the following criteria: at least 1 reported injury and/or fatality or Historical Significance. No minimum dollar amount for Losses was used. All information is derived from the best data available at the time.								
Source: Greenlee County Multi-Hazard Mitigation Plan, FEMA Approved June 2006.								

Vulnerability

The County includes a modest proportion of population that is potentially vulnerable to hazards. There is a relatively young resident base with over 28.6% of its citizens less than 18 years of age, but only 11.2% over the age of 65. The County's 3,742 housing units reflect construction age that is proportionately much older than the statewide average, with 45% being built before 1970, compared to 19% for Arizona.

Greenlee County Populations Potentially Vulnerable to Hazards, 2005				
Jurisdiction	Population			
	Total	Under 18 yrs	65+ years	Below Poverty Level
Arizona	6,044,985	1,607,966	773,758	840,253
Greenlee County	8,300	2,374	930	930
As a % of County	100%	28.6%	11.2%	11.2
As a % of State	.14%	.52%	.112%	.11%
Source: Estimates based on US Census Bureau data, 2007. Poverty Level as defined by US Census Bureau.				

Greenlee County Dwelling Units Potentially Vulnerable to Hazards, 2005		
Jurisdiction	Housing Units	
	Total	Built Before 1970
Arizona	2,544,806	490,710
Greenlee County	3,742	1,702
Source: Estimates based on US Census Bureau. Data, 2007.		

Hazards & Mitigation Strategy

Using the results of the County's vulnerability and capability analysis and the goals and objectives, a list of actions/projects was formulated. The actions/projects were then evaluated and ranked using the STAPLEE procedure. Below are the top ranking identified hazards and their actions/projects as indicated in the County's Hazard Mitigation Plan approved by FEMA on June 15, 2006:

Flooding/Flash Flooding

Action 1: Design, construct and maintain a 100 year floodplain levee to protect the Town of Duncan.

Action 2: Design, construct and maintain a backflow prevention gate at the ADOT drainage channel east of Whitefield Wash.

Wildfires

Action 1: Build and equip a new fire substation in the area north of Duncan to service areas north of Gila River.

Action 2: Develop and adopt a defensible space ordinance for development within the urban wildland fire interface areas.



Mitigation Strategy Progress

Through development of this Plan, the need to significantly refine the goals/objectives and actions/projects in our original Plan was evident. We believe this need is a result of the determination to focus the Plan more on natural caused hazards as other hazards are covered in their appropriate plans (i.e. health, terrorism, etc.). There is also much to be said about the increased amount of information available regarding hazard mitigation planning.

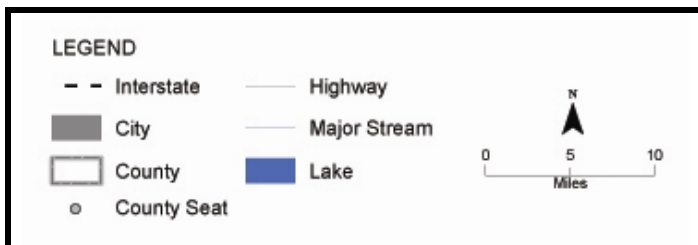
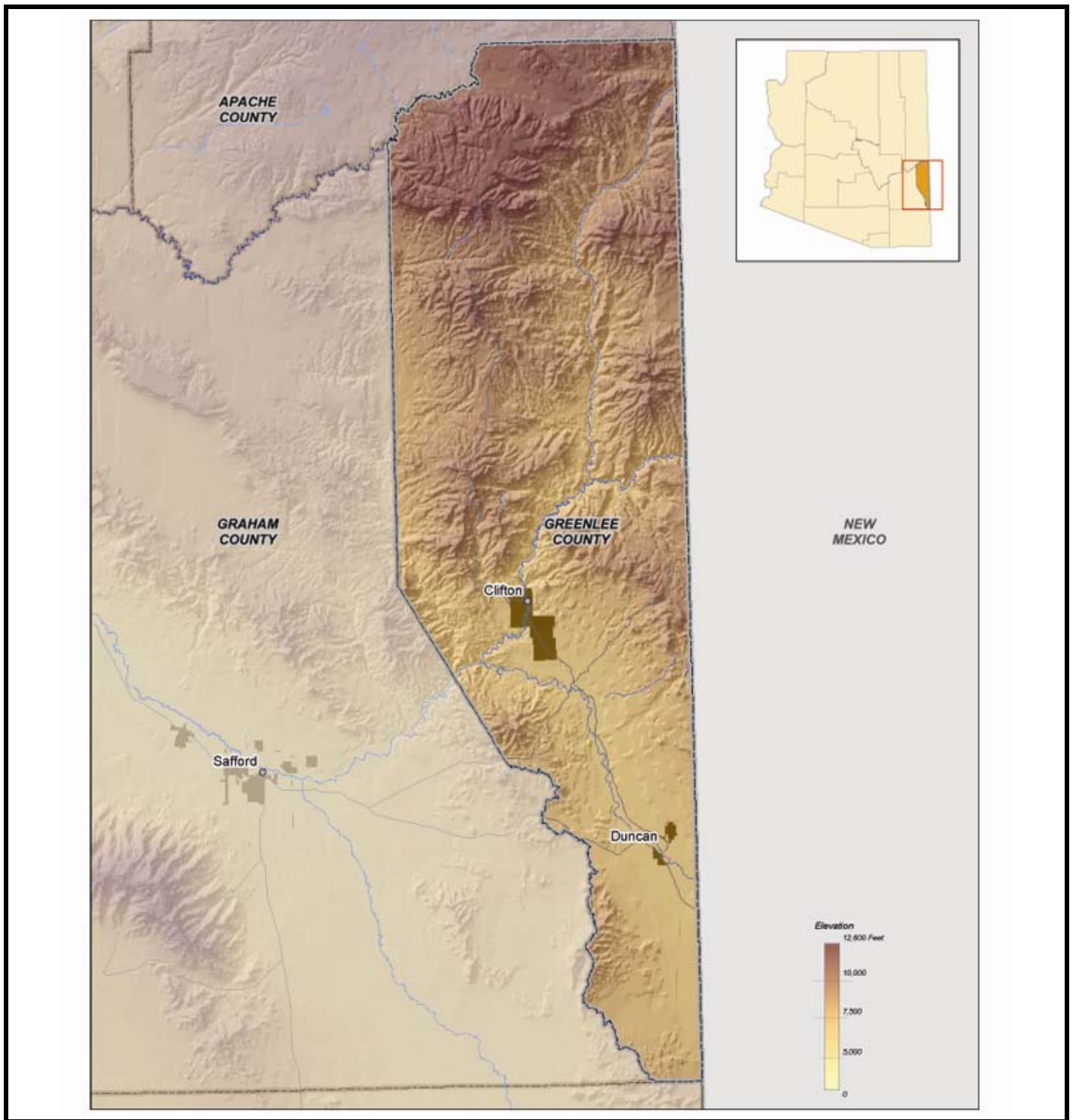
To encourage our jurisdictions to re-evaluate their Plan's Mitigation Strategy as well, each County was asked to indicate their action/project progress since the development of their Plan. In response to our request, the County provided the information below in May 2007:


Action/Project Name	Action# in Current Plan	Hazard Mitigated	Progress Summary	Comments
Flood Alert System for	4.A.2	Flood	In progress	

Other Planning Mechanisms

During their planning process, the County staff reviewed and evaluated their resources and capabilities in the areas of Existing Plans, Policies and Ordinances; Technical Staff/Resources and Financial Resources. Although all resources are important to a community's ability to mitigate the effects of natural and human-caused hazards, we elected to ask the County to complete a survey indicating their legal and regulatory resources to be included in the Plan. We are pleased to receive feedback that reflects awareness of the need for regulations and guidelines that may have an effect on loss reduction. We believe such resources and capabilities can play a critical part in developing and maintaining a more disaster resistant community. The information below was provided by the County in May 2007:

	Yes or No	Approval Date	Responsible Authority	Plan Use/Comments
Plan/Policy/Ordinance				
Zoning Ordinance	Y	2/1985		
Subdivision Ordinance or Regulations	Y	1/1978		
Special Purpose Ordinance	N/A			
General or Comprehensive Plan	Y	3/2003		
Emergency Response Plan	Y			
Post-Disaster Recovery Ordinance	Y			
Post-Disaster Recovery Plan	Y			
Other: Floodplain Plan	Y	6/1985		
Source: Survey from ADEM to County Emergency Managers, 2007.				





State of Arizona
Multi-Hazard Mitigation Plan

Map 8
**Major Features of
Greenlee County**